occurred. 4. However unfavorable the circumstances may seem, we must not be too hasty in affirming that union will not take place, but if it does and if secondary carcinomatous deposit has been the cause of the accident, the fracture will certainly recur if the life of the patient be sufficiently prolonged.

SPONTANEOUS DISAPPEARANCE OF CARCINOMA OF THE LIP.

Cases of spontaneous disappearance of carcinoma are extremely rare, even in the presence of the toxins of erysipelas. As regards the lip, I have been unable to find mention of a single instance; in fact, as Quénu remarks, "The prognosis is grave in all epitheliomata of the mucous surfaces or of the intermediary zones." Fibrous carcinomas of the breast, however, occasionally undergo spontaneous cure, especially in old women (Billroth), and Kaposi[5] asserts that superficial epitheliomata of the skin sometimes heal without treatment. Stoerck reports an epithelioma of the tonsil, which disappeared without interference, although recurrence took place in one year, necessitating resection of the lower jaw. E. Senger[6] claims to have seen certain

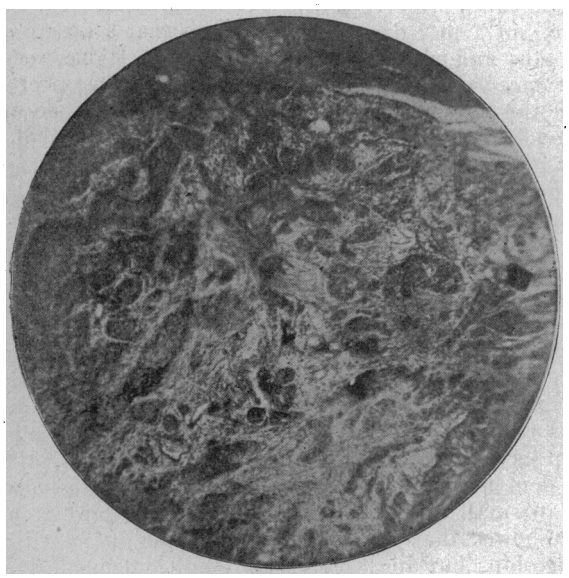

Figure 2.

tumors of the buccal mucous membrane, exhibiting all the microscopic evidences of carcinoma, vanish after the removal of jagged and irritating teeth. He agrees, however, with Gussenbauer, that they were probably not true carcinomata, the clinical evidence being, perhaps, more trustworthy than the microscopic in such cases.

In March, 1899, a man aged 38 years, came under my care in St. Anthony's Hospital, Denver. There was no history nor evidence of syphilis. Three years previously a small, superficial, indurated sore, covered with a crust, appeared on the right half of the lower lip, at the muco-cutaneous junction. It remained about one year, sometimes almost disappearing, and then enlarging to its original size. Occasionally the patient would dislodge the crust with his tongue. No treatment of any kind was employed, and there was no attack of erysipelas, but the ulcer finally disappeared and did not return, leaving a slight, scarcely recognizable scar.

Less than one year later, and nearly two years from the beginning of the disease on the lip, a movable, glandular swelling was noticed in the right submaxillary region. Nine or ten months later this was removed, local recurrence taking place within three weeks. Two weeks later another operation was performed, but the progress of the growth was but temporarily checked.

At the time of my examination a large, inoperable, deeply ulcerated, indurated tumor existed over the right inferior maxilla, the neck, and the side of the face. Microscopic sections revealed a typical epithelioma (Fig. 2). The prolonged administration of the toxins of erysipelas and prodigiosus produced no effect, and death shortly supervened.

I am well aware that microscopic evidence of the carcinomatous nature of the original ulcer of the lip is wanting in this case; but the circumstantial evidence is so strong as to admit of no reasonable doubt.

This anomalous cure might be explained by assuming: 1. Great general resistance to the invasion of carcinoma. We would then have to admit that this resistance was subject to variation at short intervals without apparent cause, or that it was much greater in the lip than in the submaxillary gland. 2. Slight virulence of the epithelioma. Here the hypothesis would be necessary that the virulence varied at different times and in different tissues. 3. The disappearance of some inhibitory product temporarily existing within the body. Which of these suppositions is correct must remain purely problematical.

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THE RATIONAL USE AND LIMITATIONS OF THERAPEUTIC MEASURES INTENDED TO PROMOTE THE ABSORPTION OF EXUDATES WITHIN THE EYEBALL. MEDICINAL MEASURES.*

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If there has been one branch of ophthalmology which has been neglected in our study and research, it is the general therapeutic measures. I know of only two works on the subject of general therapeutics in relation to the eye, which treat exhaustively—one is a little book called "Ocular Therapeutics," by Ohlemann, the other by Carl Ferdinand Graefe, father of the great Albrecht v. Graefe, and published in 1817. Ohlemann, in his preface says: "Since 1817 when Ferdinand Graefe wrote his 'Repertorium Augenärztlicher Heilmittel,' no attempt has been made to treat the remedial agents used in ophthalmology exhaustively, and to supply a treatise on the subject that might serve as a guide to the practicing physician. This is the more interesting when it is remembered that C. F. Graefe made the assertion that in no branch of therapeutics is the value so worthy of consideration as in ophthalmology."

We are very liable to lose sight of the fact that we are ophthalmic practitioners as well as ophthalmic surgeons, and we are prone to forget the general systemic remedies in our eagerness to use the knife and needle. Granting that general therapeutic measures have a certain usefulness in the cure of diseases in every organ of the body, why have we not given more attention and thought to this very pertinent branch, and some one of the profession in this line of practice directed his energy toward the compilation of an exhaustive text-book on this subject, which to my mind would be a most important adjunct to the literature we have regarding ophthalmology?

We all fully appreciate the dire necessity of administering general therapeutic remedies in certain ocular diseases dependent on causes which the ocular trouble

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is simply a manifestation of, sometimes grave systemic disorder, such as syphilis, tuberculosis, rheumatism, diabetes, etc., and in these troubles we could never hope to bring about resolution unless we resorted to the general therapeutic remedies; so, if this be true in any particular, why should it not be true in the great majority of ocular diseases, especially when it is remembered that here we have to deal with the most sensitive and delicate structure in the whole body, its blood supply being comparatively less than in any other organ; therefore, such blood should be of the purest kind, or laden with such remedies as will bring about the desired results.

It has been a custom for years, in the treatment of ocular diseases, for me to first put my patients under the best hygienic environment possible, and give such general remedies as we would naturally expect to obtain the best results from in so doing. In the consideration of general therapeutic measures intended to promote the absorption of exudates within the eyeball, the field is practically unlimited, and if I were to enumerate all of the different drugs which from time to time have been recommended to promote the absorption of exudates, they would probably fill a good-sized book, and as a "limitation" has been wisely placed on this subject by the Chairman of this Section, who kindly invited me to make this address, I will confine my remarks to those therapeutic agents which in my own experience have proved efficacious. It is entirely unnecessary to begin this subject regarding the fundamental principles of general treatment, as every practitioner of medicine will readily appreciate the reasons for so doing. In cases of severe inflammatory conditions of the eye, it is of paramount importance that the subject should be at rest, and in my estimation we neglect placing patients in bed quite too often. If we made it a rule rather than the exception, I feel sure that better and quicker results would ensue from treatment; not only from the fact of the patient being at rest, but from what this entails, such as avoidance of sunlight and dust, extremes of temperature and other recognized irritants. We must watch symptoms and treat them accordingly, giving attention to the circulatory and respiratory systems, and especially to the secretory and excretory functions, and not only must these be inquired into at the first examination, but they ought to be constantly watched during the whole course of the disease. The old custom of giving an active cathartic in the beginning of all inflammatory troubles is a good one, as there are very few cases in which they are not indicated.

If our patient is suffering from pain and is restless, these conditions should be relieved, as all excitement of whatever nature must be controlled in order to put one in a favorable way toward rapid recovery. Blood-letting is no doubt very beneficial in certain acute inflammatory conditions of the eyes; in acute iritis, for instance, the trouble is very frequently controlled, and the effect of the local instillation of atropin is clearly seen after drawing from two to three ounces of blood from the region of the temple. The method employed is largely a matter of indifference with me; whether the natural leech is used or the artificial one of Heurteloupe, so far as I can determine, is immaterial, the object being depletion of the parts; however, the artificial leech is not so disgusting to most patients, and from this fact alone is preferable. In any event, the patient must be in bed and remain there several hours if any benefit is to be derived from blood-letting. Of all remedies, the so-called alteratives exert a greater influence in the absorption of exudates than any other class of drugs, by increasing nutrition and the constructive metamorphosis, and thus eliminate disease from the tissues. The iodids stand out pre-eminently as the most reliable; that they do promote absorption of inflammatory effusions and inflammatory thickenings is conceded. Iodid of potassium or iodid of sodium is generally given; the latter is usually better assimilated and does not produce the disturbance in the stomach which the potassium will sometimes bring about. The dose to be administered is very important; frequently I have patients who have been referred to me by physicians, and on questioning them in regard to the number of drops taken at home, they tell me they had been taking ten drops three times daily. This is perfectly absurd, because, if we would expect to obtain results from this remedy, the dose must be steadily increased to the point of iodism, and this point can not be reached by giving small doses, as iodid of potash is very rapidly eliminated from the system, unless perchance a patient is met with who has a peculiar idiosyncrasy in this respect. It is not an uncommon thing to give as much as 200 drops of a saturated solution of iodid of potassium three times daily at Hot Springs; of course, in conjunction with the hot baths larger doses can be borne here than elsewhere, but 1 to 2 drams can be taken at a dose without the baths and no bad effects be seen. It has been my experience to see exudates disappear time after time under the larger doses, when the smaller had no appreciable effect. It is necessary to give some form of mercury, in fact it is a routine practice with me to begin treatment with inunctions, and after a thorough course has been given the iodids are then administered. It is not the rule usually to give mercury, especially in tertiary syphilis, but my experience has taught me to rely on this remedy in all such cases, as better results are obtained after a thorough course of inunctions, and I consider mercury a very important factor in the absorption of exudates. One dram is rubbed into the skin each day, and this is continued until the point of ptyalism is reached, or, which is more important, the hemoglobin is decreased. Neuman, Nothnagel and others have demonstrated the effects of mercury on the blood, both in small and tonic doses, and in the larger ones. They showed that mercury in small doses increased the hemoglobin, but in large doses long continued it decreased this important element, hence was detrimental; therefore, it behooves us to use the microscope and be on guard lest we produce some serious trouble in the kidneys, as it has also been demonstrated that after long-continued use of mercury, casts are found in the urine, to disappear after the remedy is discontinued. When it is given by inunction, it does not have to pass through the portals of the liver and more readily reaches every tissue and organ through the white blood cells. Generally speaking, inunctions for three or four weeks in moderate daily doses carry the patient to the top of the hemoglobin hill, and everything beyond is hurtful. The blood should be examined at the beginning of a mercurial course, as well as the urine, and these ought to be watched during the whole time.

Mercury and the iodids are not alone beneficial in removing exudates caused by syphilis, but in many other etiologic conditions, so in these two remedies we have the sheet-anchor. Among the diaphoretics used to promote the absorption of exudates, probably pilocarpin has first place, as it will unquestionably produce profuse diaphoresis, and by so acting effusions are more readily absorbed; especially is this true if the patient will abstain as far as possible from liquids, not only during

the time the sweating process is in operation, but for hours afterward. Taken in ¼-grain doses hypodermically, the effects are quickly seen; it is in those cases where prompt action is necessary that this drug is strongly indicated. The patient should be placed in bed before the injection is given, with woolen blankets under and over him to get the best results from this remedy, as the sweating process is thereby prolonged.

Salicylate of sodium is another remedy of marked virtue in the absorption of exudates, especially in cases of rheumatic origin or uric-acid diathesis. Thirty grains well diluted in water every four hours acts well in many cases. If one of the digestive ferments, such as pepsin, is given along with the salicylate, the distressing stomach disturbance often seen after large and continued doses of this drug will be greatly obviated. Aminoform is a remedy that I have recently used as a substitute for salicylate of sodium, as it was claimed that it did not produce the stomach disorder which large and continued doses of salicylic acid would bring about. It is soluble in water and is given in 10-grain doses every four hours. I have found it very beneficial in rheumatic iritis; it not only relieves the inflammatory condition, but also the pain which usually accompanies it.

In hydrotherapy we have the most valuable adjunct to the administration of internal remedies. The absorption of exudates is brought about through elimination, and certainly in hot baths this is shown most beautifully. The method employed at Hot Springs, in giving the baths and remedies, I believe to be superior to those of continental Europe, so I shall therefore give the routine way of prescribing them at Hot Springs. The natural heat of the waters from different springs ranges in temperature from 96 to 157 degrees F., so it is necessary to temper the hot water with water which the night before has been allowed to run into a "cold water" tank from the springs, and is therefore cold. The temperature of the baths is usually about 98 F., but if active diaphoresis is desired the temperature is sometimes increased to 102 F. The patient stays in the tub ten minutes, and during this time drinks two or three cupfuls of hot water. I may say that the bath-houses are so constructed and equipped that it is almost imposible for one to "catch cold" after the bath has been taken, as there are a series of rooms kept at different temperatures, the patient being taken from the tub to a temperature which is the same as the bath, or in case profuse sweating is desired, to a warmer room, and then to a cooler one, until finally he is in the same temperature as on the outside. After coming from the tub, an attendant with crash towels rubs him thoroughly, a bath-robe is placed around him and then he lies down on a wicker couch fifteen minutes or more with bath-robe and heavy towels over him, to go through the sweating process.

The place wherein the bath is taken constitutes a very important element, as it has frequently been my experience to see patients who have taken the baths in their rooms at the hotels with the same water, but under different conditions from the regular bath-houses, not do so well until a change has been made to the latter. When it is not possible for one to avail himself of the opportunity of taking the baths as just described, a special steam-heat apparatus has been devised for producing diaphoresis, but as I have had no experience with this method, I will not go into details; however, with proper precautions and surroundings I believe it to be reliable.

If mercury is indicated during the course of baths, it is rubbed into the skin each day after the patient has taken the bath. This is done by a trained attendant, who, with rubber gloves to protect his hands, continues to rub until the mercury is thoroughly absorbed by the skin. The patient is not allowed to perspire freely during the course of mercury, only enough to keep the pores of the skin open for the reception of the drug. After the course has been completed, the patient is given vapor baths for a few days to eliminate any excess of mercury which may be in the system; he is then ready for the course of iodids, taking the baths usually through the entire course. It is better to have the inunctions administered by a trained attendant, as experience shows that the patient will not as a rule devote the proper time and attention to the rubbing.

In the internal administration of mineral waters to produce the absorption of exudates, I have had little experience, as usually the methods already described have been satisfactory. It is a question in my mind whether they exert their usefulness through any mineral properties they may contain, or whether it is in the great quantity of water taken into the system which will necessarily stimulate elimination.

The limitation of therapeutic remedies used to promote the absorption of exudates is very circumscribed in a way, and after all has been said, alteratives, mercury and iodids, pilocarpin, salicylate of sodium and the hot baths constitute about the whole number of remedies on which we can place much reliance. Exudates of specific and uric acid origin can without question be controlled, but in other cases we are frequently disappointed, do what we may in the case.

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SUPPURATING MASTOIDITIS, WITH THE REPORT OF CASES.

SUPPURATING OTITIS MEDIA, BOTH EARS; SUPPURATING MASTOIDITIS ON THE RIGHT SIDE, ABSCESS EXTENDING INTO THE DEEPER TISSUES OF THE NECK, AND EXTRADURAL ABSCESS.

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The following cases represent some of the various forms of mastoiditis resulting from epidemic influenza, and are instructive as they do not all present the uniform indications for operation.

CASE I.—I saw this patient, a boy 6 years of age, May 1, 1897, in consultation with his family physician, Dr. G. L. Magruder, who gave me the history of a case of suppurating otitis media in both ears, resulting from epidemic influenza. The little patient was extremely emaciated, with a small and feeble pulse; there was a profuse purulent discharge from both external auditory canals, and over the right mastoid region, extending back toward the occiput and downward into the neck for several inches, there was a large boggy swelling, very sensitive to pressure; the right auricle was also very prominent. There were no brain symptoms, as far as could be ascertained. An operation having been decided on, the following morning, May 2, the child was etherized, and the head shaved in the region of the operation; an incision was then made in the swelling, commencing just above the auricle, and extending downward some distance on the neck. Following the free incision there was a profuse discharge of pus, which was found to be flowing from a fistulous opening in the upper part of the mastoid bone, the whole outer layer of which was in a highly necrosed state. This was removed with the chisel and gouge, and it was then discovered that the whole mastoid

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